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10/523,877	02/07/2005	Yukihiro Fujita	NGB-37577	2135

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EXAMINER
LAROSE, COLIN M

ART UNIT	PAPER NUMBER
2624	

NOTIFICATION DATE	DELIVERY MODE
07/09/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All   b)☐ Some *   c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>2/7/05; 9/28/07</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Specification

1.   A substitute specification in proper idiomatic English and in compliance with 37

CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a

statement that it contains no new matter.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

3.   Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention. Claim 16 recites the limitation "the plurality of character images that are

connected together". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject
Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as
follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive
> material." In this context, "functional descriptive material" consists of data structures and computer programs
> which impart functionality when employed as a computer component. (The definition of "data structure" is "a
> physical or logical relationship among data elements, designed to support specific data manipulation functions."
> The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional

descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

5.   Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 20 defines a program embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.   Claims 1, 2, 4-10, 12, and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated

by U.S. Patent 6,473,523 by Newman et al. ("Newman").

Regarding claim 1, Newman discloses a character recognition processing device (figures

1-2), comprising:

an image fetching unit, which fetches image data of a character image as an object to be

recognized, the character image being photographed for recognizing a character (S10, figure 6);

a cursor information output unit, which outputs cursor position information showing a

position of a character frame for recognizing the character corresponded with the character

image (S101, figure 12: cursor position information is read);

a layout analyzing unit, which collates the cursor position information with the fetched

image data of the character image to analyze an arrangement of the character (S102, figure 12:

cursor crosshairs are collated with the image data and displayed, such as in figure 13);

a character cutting unit, which extracts the character image on the basis of the analyzed

result of the layout analyzing unit (S121, figure 14: an area of character data (text) is extracted

according to the cursor positioning, as shown in figure 13, and copied into storage for further

processing); and

a character recognizing unit, which recognizes the extracted character image as the

character and converts the character image to character information (S124, figure 14).

Regarding claim 2, Newman discloses when the character image as the object to be

recognized is configured by a plurality of character images obtained by a continuous

photographing operation, the image fetching unit fetches the image data of the character images

respectively by a prescribed area from all of the character images; and wherein the layout

analyzing unit collates the cursor position information with each of the fetched image data of the

plurality of character images to analyze the arrangement of the characters (figure 4: the camera

continuously feeds images of the character (text) data to the viewfinder to be displayed with the

crosshairs superimposed thereon).

Regarding claim 4, Newman discloses a portable terminal device having the character

recognition processing device according to any one of claims 1 to 3 (figure 1).

Regarding claim 5, Newman discloses a portable terminal device (figures 1-2),

comprising:

a photographing unit, which photographs a character image as an object to be recognized

for recognizing a character (8, figure 2);

an image fetching unit, which fetches image data of the photographed character image

(S10, figure 6);

a cursor information output unit, which outputs cursor position information showing the

position of a character frame for recognizing the character corresponded with the character

image (S101, figure 12: cursor position information is read);

a layout analyzing unit, which collates the cursor position information with the fetched

image data of the character image to analyze the arrangement of the character (S102, figure 12:

cursor crosshairs are collated with the image data and displayed, such as in figure 13);

a character extracting unit, which extracts the character image on the basis of the

analyzed result of the layout analyzing unit (S121, figure 14: an area of character data (text) is

extracted according to the cursor positioning, as shown in figure 13, and copied into storage for

further processing); and

a character recognizing unit, which recognizes the extracted character image as the

character and converts the character image to character information (S124, figure 14).

Regarding claim 6, Newman discloses a character frame display unit which displaying

[sic] a character frame for recognizing the character so as to overlap on the character image upon

photographing by the photographing unit (see figure 13).

Regarding claim 7, Newman discloses a recognized character display unit (viewfinder 4)

which displays the character information as a recognized result by the character recognizing unit

(figure 3: "DISPLAY TEXT").

Regarding claim 8, Newman discloses the recognized character display unit individually

selectively displays the character information as the recognized result by a prescribed character

unit (i.e. the DISPLAY TEXT routine selectively displays the results of the OCR operation on

the viewfinder 4).

Regarding claim 9, Newman discloses a recognized character storing unit which stores

the character information as the recognized result obtained by the character recoonizing [sic] unit

(S129, figure 14).

Regarding claim 10, Newman discloses the recognized character storing unit stores the

character information in a recognized character storing area (figure 15).

Regarding claim 12, Newman discloses a recognized character utilizing unit which

utilizes the character information as the recognized result obtained by the character recognizing

unit in accordance with the type of the character information (i.e., viewfinder 4 utilizes the

recognized result and displays it according to the type of characters that were recognized).

Regarding claim 17, Newman discloses the photographing unit has a function for

continuously photographing the character image as the object to be recognized (52, figure 4);

wherein when a plurality of the character images as the objects to be recognized are obtained by

the photographing unit, the image fetching unit fetches the image data of the plurality of

character images; and wherein the character recognizing unit recognizes the characters of the

image data respectively for the plurality of fetched character images to convert the image data to

the character information (i.e., Newman's camera is capable of taking multiple images of text

data and performing OCR on each of those images, respectively).

Regarding claim 18, Newman discloses wherein the character recognizing unit has a

plurality of recognizing modes which is corresponded with types of the characters as the objects

to be recognized; and wherein the character recognizing unit carries out a character recognizing

process suitable for the corresponding type of the character in accordance with a preset

recognizing mode (figure 3: text and image-plus-text modes; no translate, auto-translate, and

select language modes).

Regarding claim 19, Newman discloses a character recognition processing method

(figures 3, 6, 12, and 14) comprising the steps of:

photographing a character image as an object to be recognized while displaying the

character image together with a character frame for recognizing a character (8 and 4, figure 2);

fetching the image data of the photographed character image (S10, figure 6);

outputting cursor position information showing the position of the character frame for

recognizing the character corresponded with the character image (S101, figure 12: cursor

position information is read);

collating the cursor position information with the fetched image data of the character

image to analyze the arrangement of the character (S102, figure 12: cursor crosshairs are collated

with the image data and displayed, such as in figure 13);

extracting the character image on the basis of the analyzed result of the arrangement of

the character (S121, figure 14: an area of character data (text) is extracted according to the cursor

positioning, as shown in figure 13, and copied into storage for further processing); and

recognizing the extracted character image as the character and converting the character

image to character information (S124, figure 14).

Regarding claim 20, Newman discloses a character recognition processing program in which the respective steps defined in claim 19 are executed by a computer (program performed by CPU 21, figure 2).

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,473,523 by Newman et al. ("Newman") in view of U.S. Patent Application Publication 2003/0169923 by Butterworth ("Butterworth").

Regarding claims 3 and 16, Newman discloses when the character image as the object to be recognized is configured by a plurality of character images obtained by a continuous photographing operation, the image fetching unit fetches the image data of the character images respectively by a prescribed area from all of the character images; wherein the layout analyzing unit collates the cursor position information with the image data (figure 4: the camera continuously feeds images of the character (text) data to the viewfinder to be displayed with the crosshairs superimposed thereon).

However, Newman does not appear to teach that the plurality of fetched character images is connected together, as claimed.

Butterworth discloses a system for capturing partial images of an area of text and then stitching them together as shown in figure 4. In particular, Butterworth teaches that "OCR requires high definition images. For some documents, several hundred thousand pixels or more may be required to obtain the desired recognition accuracy. However, some digital cameras, such as some digital cameras for cell phones, may only have a small number of pixels (e.g., 352x288). In such limited-pixel systems, only a small portion of a document can be imaged at a high enough resolution for OCR. Multiple images of a document can be "stitched" together to create a larger image with more pixels. Then, OCR can be performed on the larger image." (paragraph [0003]). In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Newman by Butterworth to capture text images that are "connected" in order to stitch them together to form a text image/file of the overall text area that can be displayed with crosshairs according to Newman's method.

10.   Claims 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,473,523 by Newman et al. ("Newman") in view of U.S. Patent Application Publication 2002/0131636 by Hou ("Hou").

Regarding claim 11, Newman does not appear to disclose registering the character information in a data base corresponding to a type of each character information when the type of the character information is any one of a telephone number, a mail address and a URL (Uniform Resource Location). Regarding claims 13 and 14, Newman does not appear to disclose when the type of the character information is the telephone number/mail address, the recognized

character utilizing unit displays a transmitting screen to the telephone number/preparing screen

for an email, as claimed.

Hou discloses a PDA that is operable to scan business cards and the like and extract

information therefrom via OCR. In particular, when telephone numbers or email addresses are

extracted, the PDA is able to recognize them as such and store them in a database for later use. In

addition, the scanned information can be displayed (figure 2B) along with icons (218, 220) that

allow a user to place a phone call or initiate an email when pressed. It would have been obvious

to one of ordinary skill in the art at the time of the invention to modify Newman by Hou to

achieve the claimed invention by registering email addresses and phone numbers in a database

and displaying a transmitting screen for a phone number or a preparing screen for an email

address when either is recognized on a portable imaging device having communications

capabilities since registering such information in a database for later use and displaying such

screens facilitates automatic communication with a recognized telephone number or email

address.

11.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent

6,473,523 by Newman et al. ("Newman") in view of U.S. Patent 7,188,307 by Ohsawa

("Ohsawa").

Regarding claim 15, Newman does not appear to disclose when the type of the character

information is the URL (Uniform Resource Locator), the recognized character utilizing unit

displays a network connecting screen to the URL.

Ohsawa discloses a system for imaging text (character strings) and then extracting URLs

from the text data for automatic access thereto. In particular, Ohsawa teaches that it is desirable

to automatically access a webpage when a URL is identified in an image so that a user does not

have to manually open a browser to access the site (columns 1/29-35; 7/61-65). In view of this

teaching, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Newman by Ohsawa to achieve the claimed invention by displaying a

network connecting screen to a recognized URL.

Related Prior Art

12.   Additional prior art document(s) considered by the Examiner but not relied upon are

listed on the attached "Notice of References Cited."

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If

attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian

Werner, can be reached on (571) 272-7401. The fax phone number for the organization where

this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. Any inquiry

of a general nature or relating to the status of this application or proceeding can also be directed

to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

/Colin M. LaRose/
Colin M. LaRose
Primary Examiner
Group Art Unit 2624
6 July 2008